

What is claimed is:

1. A battery powered source for an air handling system used for subsurface aeration, comprising:
  - an air pump configured to provide at least one of air under pressure and a partial vacuum;
  - a motor mechanically connected to said air pump;
  - a storage battery for providing power to said motor;
  - a battery charger for charging said storage battery, said battery charger obtaining power from a power source, said power source when operating alone having insufficient capacity to drive a motor of suitable size to operate said air pump satisfactorily; and
  - a control circuit responsive to commands, said control circuit operatively coupled to said storage battery to control a connection of said storage battery to provide power to said motor;whereby, in response to a command, said control circuit connects said storage battery to provide power to said motor, and said storage battery provides sufficient power to operate said air pump satisfactorily for operation of an air handling system used for subsurface aeration.
2. The battery powered source for an air handling system of Claim 1, further comprising a reversing mechanism in fluid communication with said air pump, said reversing mechanism configured to cause air to flow in a first flow direction to provide air under pressure, and configured to cause air to flow in a second flow direction to provide a partial vacuum.
3. The battery powered source for an air handling system of Claim 1, wherein said control circuit is operatively coupled to said storage battery and to said battery

charger to control a connection of at least one of said storage battery and said battery charger to provide power to said motor.

4. The battery powered source for an air handling system of Claim 1, wherein said storage battery is a deep discharge battery.
5. The battery powered source for an air handling system of Claim 1, wherein said motor is a DC motor.
6. The battery powered source for an air handling system of Claim 5, wherein said control circuit is operatively coupled to said storage battery and to said battery charger to connect said storage battery and said battery charger to provide power to said DC motor.
7. The battery powered source for an air handling system of Claim 1, wherein said system further comprises an inverter configured to be connected to said storage battery, and said motor is an AC motor.
8. The battery powered source for an air handling system of Claim 7, wherein said control circuit is operatively coupled to said storage battery to connect said storage battery to said inverter to provide power to said AC motor.
9. The battery powered source for an air handling system of Claim 8, wherein said control circuit connects said storage battery to said inverter, and connects said inverter and said AC power source to provide power to said AC motor.
10. The battery powered source for an air handling system of Claim 1, wherein said power source is a selected one of an AC power source, a solar cell array, a generator driven by an engine, a wind turbine, and a fuel cell.

11. The air handling system of Claim 10, wherein said engine is an engine that uses a selected one of gasoline, diesel fuel, compressed gas, and natural gas as fuel.
12. An air handling system used for subsurface aeration, comprising:
  - a subsurface aeration conduit for providing to a designated area at least one of air under pressure and a partial vacuum;
  - an air pump in fluid communication with said subsurface aeration conduit, said air pump configured to provide at least one of air under pressure and a partial vacuum;
  - a motor mechanically connected to said air pump;
  - a storage battery for providing power to said motor;
  - a battery charger for charging said storage battery, said battery charger obtaining power from a power source, said power source when operating alone having insufficient capacity to drive a motor of suitable size to operate said air pump satisfactorily; and
  - a control circuit responsive to commands, said control circuit operatively coupled to said storage battery to control a connection of said storage battery to provide power to said motor;whereby, in response to a command, said control circuit connects said storage battery to provide power to said motor, and said storage battery provides sufficient power to operate said air pump satisfactorily for operation of said air handling system used for subsurface aeration.
13. The air handling system of Claim 12, wherein said power source is a selected one of an AC power source, a solar cell array, a generator driven by an engine, a wind turbine, and a fuel cell.

14. The air handling system of Claim 12, wherein said engine is an engine that uses a selected one of gasoline, diesel fuel, compressed gas, and natural gas as fuel.
15. The air handling system of Claim 12, further comprising a reversing mechanism in fluid communication with said air pump and with said subsurface aeration conduit, said reversing mechanism configured to cause air to flow in a first flow direction to provide air under pressure, and configured to cause air to flow in a second flow direction to provide a partial vacuum.
16. The air handling system of Claim 12, wherein said control circuit is operatively coupled to said storage battery and to said battery charger to control a connection of at least one of said storage battery and said battery charger to provide power to said motor.
17. The air handling system of Claim 12, wherein said storage battery is a deep discharge battery.
18. The air handling system of Claim 12, wherein said motor is a DC motor.
19. The air handling system of Claim 18, wherein wherein said control circuit is operatively coupled to said storage battery and to said battery charger to connect said storage battery and said battery charger to provide power to said DC motor.
20. The air handling system of Claim 12, wherein said system further comprises an inverter configured to be connected to said storage battery, and said motor is an AC motor.

21. The air handling system of Claim 20, wherein said control circuit connects said storage battery to said inverter, and connects said inverter to provide power to said AC motor.
22. The air handling system of Claim 20, wherein said control circuit connects said storage battery to said inverter, and connects said inverter and said power source to provide power to said AC motor.
23. The air handling system of Claim 12, wherein said area of interest is an area situated within a golf course.
24. The air handling system of Claim 23, wherein said area situated within a golf course comprises at least a portion of a selected one of a golf course green, a fairway, a tee, a bunker, a walkway, a gallery viewing area, a driving range, a putting green, and a practice area.
25. A method of providing subsurface aeration services to an area of interest, comprising the steps of:
  - providing a subsurface aeration system that is configured to supply to a designated area at least one of air under pressure and a partial vacuum, said subsurface aeration system comprising;
    - a subsurface aeration conduit for providing to a designated area at least one of air under pressure and a partial vacuum;
    - an air pump in fluid communication with said subsurface aeration conduit, said air pump configured to provide at least one of air under pressure and a partial vacuum;
    - a motor mechanically connected to said air pump;
    - a storage battery for providing power to said motor;

- a battery charger for charging said storage battery, said battery charger obtaining power from a power source, said power source when operating alone having insufficient capacity to drive a motor of suitable size to operate said air pump satisfactorily; and
- a control circuit responsive to commands, said control circuit operatively coupled to said storage battery to control a connection of said storage battery to provide power to said motor; and
- issuing a command whereby said control circuit connects said storage battery to provide power to said motor, and said storage battery provides sufficient power to operate said air pump satisfactorily to provide at least one of air under pressure and a partial vacuum to said area of interest.
26. The method of providing subsurface aeration services of Claim 25, wherein said area of interest is an area situated within a golf course.
27. The method of providing subsurface aeration services of Claim 26, wherein said area situated within a golf course comprises a selected one of a golf course green, a fairway, a tee, a walkway, a gallery viewing area, a driving range, a putting green, and a practice area.
28. The method of providing subsurface aeration services of Claim 25, wherein said step of issuing a command is repeated so that during a first time interval air under pressure is provided to said area of interest and during a second time interval distinct from said first time interval a partial vacuum is provided to said area of interest.
29. The method of providing subsurface aeration services of Claim 25, wherein said subsurface aeration system further comprises a reversing mechanism in fluid communication with said air pump and with said subsurface aeration conduit, whereby, in response to a command, said reversing mechanism causes air to flow in a

selected one of a first flow direction to provide air under pressure and a second flow direction to provide a partial vacuum.

30. The method of providing subsurface aeration services of Claim 25, wherein said control circuit controls a connection of at least one of said storage battery and said battery charger to provide power to said motor.
31. The method of providing subsurface aeration services of Claim 25, wherein said storage battery is a deep discharge battery.
32. The method of providing subsurface aeration services of Claim 25, wherein said motor is a DC motor.
33. The method of providing subsurface aeration services of Claim 32, wherein said control circuit connects both said storage battery and said battery charger to provide power to said DC motor.
34. The method of providing subsurface aeration services of Claim 25, wherein said subsurface aeration system further comprises an inverter configured to be connected to said storage battery, and said motor is an AC motor configured to be connected to said inverter.
35. The method of providing subsurface aeration services of Claim 34, further comprising the step wherein said control circuit connects said storage battery to said inverter.
36. The method of providing subsurface aeration services of Claim 35, wherein the step of said control circuit connecting said storage battery to said inverter comprises connecting said inverter to provide power to said AC motor.

37. The battery powered source for an air handling system of Claim 35, wherein said power source is a selected one of an AC power source, a solar cell array, a generator driven by an engine, a wind turbine, and a fuel cell.
38. The battery powered source for an air handling system of Claim 37, wherein said engine is an engine that uses a selected one of gasoline, diesel fuel, compressed gas, and natural gas as fuel.
39. The method of providing subsurface aeration services of Claim 35, further comprising the step wherein said control circuit connects both said inverter and said power source to provide power to said AC motor.